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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.         | CONFIRMATION NO.       |
|---|-------------|----------------------|-----------------------------|------------------------|
| 10/631,254  | 07/31/2003  | Kenneth W. Junk      | 06005/39548                 | 1586                   |
| 4743 7590 02/06/2008<br>MARSHALL, GERSTEIN & BORUN LLP<br>233 S. WACKER DRIVE, SUITE 6300<br>SEARS TOWER<br>CHICAGO, IL 60606 |             |                      | EXAMINER<br>RAYMOND, EDWARD |                        |
|   |             |                      | ART UNIT<br>2857            | PAPER NUMBER           |
|   |             |                      | MAIL DATE<br>02/06/2008     | DELIVERY MODE<br>PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

|                              |                        |  |                     |  |
|------------------------------|------------------------|--|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> |  | <b>Applicant(s)</b> |  |
|                              | 10/631,254             |  | JUNK ET AL.         |  |
|                              | <b>Examiner</b>        |  | <b>Art Unit</b>     |  |
|                              | /Edward Raymond/       |  | 2857                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 January 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3,5-11 and 13-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-11 and 13-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1, 3, 5-11 and 13-23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Keyes, IV in view of Esler.

Keyes, IV et al. teach a diagnostic system for a field device in a process control apparatus (Claims 1, 11, 17, 17 and 22: see paragraph 12), comprising: at least one sensor associated with the process control apparatus (Claims 1, 11, 17, 17 and 22: see paragraph 23); a computer located on the field device and adapted to receive data from the sensor and to detect an occurrence of a predetermined process event (Claims 1, 11, 17, 17 and 22: see paragraph 23); and a memory device operatively connected to the computer and adapted to store sensor data received by the computer at a time corresponding to the occurrence of the predetermined process event (Claims 1, 11, 17, 17 and 22: see paragraphs 23 and 67).

Keyes, IV et al. teach a diagnostic system wherein the memory device is further adapted to store sensor data received by the computer at times prior to the occurrence of the predetermined process event (Claim 18: see paragraph 66).

Keyes, IV et al. teach a diagnostic system wherein the memory device is further adapted to store sensor data received by the computer at times subsequent to the occurrence of the predetermined process event (Claims 3 and 13: see paragraph 66)

Keyes, IV et al. teach a diagnostic system wherein the memory device is further adapted to, store sensor data received by the computer at times prior to the occurrence of the predetermined process event and subsequent to the occurrence of the predetermined process event (Claim 14: see paragraph 66).

Keyes, IV et al. teach a diagnostic system wherein the computer is a microcontroller located on the field device (Claim 5: see paragraph 23).

Keyes, IV et al. teach a diagnostic system of claim 1, wherein the memory device is located on the field device (Claim 6: see paragraph 23).

Keyes, IV et al. teach a diagnostic system wherein the memory device is a non-volatile RAM (Claims 7: see paragraph 78).

Keyes, IV et al. teach a diagnostic system wherein the field device is a valve positioner (Claim 8: see paragraph 24).

Keyes, IV et al. teach a diagnostic system wherein the predetermined process event is an excessive travel deviation of a valve element (Claims 9, 15, 19 and 21: see paragraph 24).

Keyes, IV et al. teach a diagnostic system wherein the predetermined process event is a sensor signal, representing a sensed valve parameter, crossing a cutoff point (Claims 10, 16 and 20: see paragraph 24).

Keyes, IV et al. teach all of the features of the claimed invention, except wherein a memory device adapted to store sensor data received by the computer if the occurrence of the predetermined process event is detected. Esler teaches such a memory device (Claim 1, 11, and 17: see paragraph 28). It would have been obvious to the person having ordinary skill in the art at the time the invention was made to modify Keyes, IV, to use a trigger for storing data, as taught by Esler, because this would allow for the conservation of processing power and battery power.

### ***Response to Arguments***

3. Applicant's arguments filed March 20, 2007 have been fully considered but they are moot in view of the new grounds of rejection. Applicant's argument that Keyes, IV, does not teach a device that detects and stores an occurrence of a predetermined process event has been fully considered and is not persuasive. Keyes, IV, in view of Esler together suggests that detecting and storing an occurrence of a predetermined process event using the event as the trigger. In paragraph 66, Keyes IV describes monitoring devices that can be used to carry out any type of process control activities, data management services, predictive control monitoring, etc. The Examiner notes that to monitor a process, a predetermined or expected output is compared to the actual or measured values and reported as a fault or normally operating event. Esler teaches a method and apparatus for recording fault history information. Esler teaches a diagnostic system wherein a predetermined process event occurrence triggers the storage of data (Esler: see paragraph 28).

***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

***Contact Information***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward Raymond whose telephone number is 571-272-2221. The examiner can normally be reached on M-F 8:30-5PM.

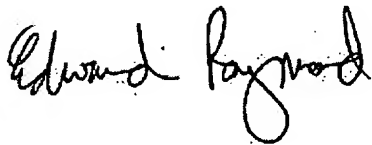
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Edward Raymond  
Primary Examiner  
Art Unit 2857

er

EDWARD RAYMOND  
PRIMARY EXAMINER

A handwritten signature in cursive script that reads "Edward Raymond".